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REMARKS

Disposition of Claims

Upon entry of the foregoing amendments, claims 1-8, 10-16, and 19-21 will remain pending in the application and stand ready for further action on the merits. Claim 1 has been amended to clarify that the metal tool tip has a threaded portion (stem) on one end, and the connector includes a threaded opening for receiving the threaded portion of the tool tip. The metal tool tip is fastened securely to the connector by means of a threading mechanism. Particularly, the threads of the tool tip stem engage the complementary threads in the opening of the connector. Claim 19 has been amended in a manner similar to amended claim 1. Additionally, claim 21 has been amended to clarify that the first and second metal tool tips have threaded openings so that they can be connected respectively to the threaded ends of the tie bar. The amendments are supported throughout the specification, particularly at page 3, paragraph 2; page 5, paragraph 4; page 6, paragraph 1 and by the drawings, particularly FIGS. 2A, 2B, 2C, 7A, 7B, and 7C. Claim 9 has been canceled as suggested by the Examiner, and dependent claims 7, 8, 10, 11, and 12 have been amended to make these claims consistent with claim 1. These amendments are supported by the specification, particularly at page 9, paragraph 2. No new matter has been added to the application.

Claim Rejections under 35 U.S.C. §112

The Office Action objects to claims 1-16 under 35 U.S.C. §112, second paragraph asserting that there is insufficient antecedent basis for the limitation, "said nonmetal cover" in claim 1. The term, "elastomeric" has been substituted in place of - - - nonmetal - - - in claim 1, line 8. There is clear antecedent basis for "elastomeric" since this term is first used in line 3 of claim 1, and elastomeric covers are discussed in the specification at page 9, paragraph 2. In view of this amendment, it is respectfully requested that the rejection under 35 U.S.C. §112 be withdrawn.

Claim Rejections under 35 U.S.C. §103

The Office Action rejects claims 1-16 and 19-21 under 35 U.S.C. §103(a) as being unpatentable over Greenstein, U.S. Patent 4,060,897 ("Greenstein") in view of Ferranti, published U.S. Patent Application 2001/0031443 ("Ferranti"). It is respectfully submitted that the presently claimed

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invention, as recited in amended claims 1-16 and 19-21, is not prima facie obvious over the disclosures in Greenstein and Ferranti for the reasons discussed below.

Applicants agree with the Examiner that Greenstein generally discloses a dental instrument having an elongated handle with first and second tool sections located on opposing ends. A serrated surface section, which functions as a vibratory member, is located in the handle section. The instrument is used for forming dental restorations. Referring to FIG. 1 in Greenstein, the handle (20) is provided with an internally threaded recess (26) on one end. A head section (30) is provided with a threaded shank (28) which is adapted for fitting within the internally threaded recess (26). The head section (30) rigidly carries a first tool (32) that is used to form the dental restoration. In FIG. 1, the first tool (32) is shown having a blade structure. At the opposing end of the handle (20), a second tool (68) extends from the serrated section (60) -- this tool (68) is designed to cut and lift the restoration material. As the Examiner points out, in one embodiment, the second tool section may be removably attached to the handle by a threaded attachment. But, Greenstein does not disclose or suggest fitting the handle with a plastic cover to provide an improved gripping surface.

Turning to the disclosure in Ferranti, this reference discloses a removable plastic sleeve that is placed over the handle of a dental instrument, for example, a sealer or curette. A soft, semi-transparent or translucent silicone is preferably used as the material to make the sleeve. Referring to FIGS. 2 and 3, the external contour of the elongated sleeve (10) includes a concave-shaped central region (19). Enlarged end regions (17, 18) are located at opposing ends of the sleeve. The Examiner takes the position that it would have been obvious to modify the structure of the dental instrument, as described in Greenstein, so that included a removable plastic sleeve, as described in Ferranti. The Examiner asserts that it would have been obvious to outfit the handle of the probe in Greenstein with the removable, elastomeric sleeve described in Ferranti. The Examiner also believes that it would have been obvious to bond the elastomeric sleeve described in Ferranti to the handle of a dental instrument, because bonding adhesives are known in the art.

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However, it is respectfully submitted that even if the disclosures in Greenstein and Ferranti were combined, the presently claimed invention still would not be obvious to a person of ordinary skill in the art. As recited in amended claims 1 and 19, the tool tip in Applicant's instrument includes a threaded portion (or stem) for attaching the tip to a connector. The threaded tool tip is inserted into the threaded opening of the connector. That is, the tool tip is removably attached to the connector. In turn, the connector is threaded into an opening in the handle. The threads of tool tip the stem portion engage the complementary threads in the opening of the connector. In this manner, the tool tip is secured tightly to the connector. The fastening of the tool tip to the connector is described at page 3, paragraph 2 of the specification and shown in FIGS. 2A, 2B, and 2C. Since the tool tip is removable in Applicant's device, the dentist can easily replace the tool tip if he or she wishes to do so. The tool tip is interchangeable with other tool tips. Applicant's means for connecting the tool tip to the connector is completely different than the connecting mechanism described in Greenstein.

Greenstein does not disclose or suggest a removable tool tip. Rather, the tool tip (32) is rigidly fixed to the tool section (32).

This tool section 32 comprises a blade-like element 34 provided with a shank 36, the latter of which extends into, and is rigidly and retentively retained within, the head 30. In this case, the flange 36 can either be inserted into the head 30 and retained therein by means of any suitable adhesive or the like. Otherwise, the flange 36 can actually be molded into and integrally formed into the head 30 during the formation thereof. (Col. 6, lines 41-49).

Greenstein provides no hint or suggestion for a removable tool tip having a threaded stem that is threaded into a threaded opening of a connector as presently claimed. A person of ordinary skill in the art looking at the teachings in Greenstein would have absolutely no basis for modifying the rigidly fixed tool tip described therein in order to produce the presently claimed invention. Greenstein is interested in a different way to connect the tool tip. In view of the foregoing, it is respectfully requested that the rejection of claims 1-16 and 19-21 under 35 U.S.C. §103(a) over Greenstein, U.S. Patent 4,060,897 ("Greenstein") in view of Ferranti, published U.S. Patent Application 2001/0031443 ("Ferranti") be withdrawn.

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Conclusion

In summary, Applicant submits that all of the claims as amended are patentable and each of the Examiner's rejections and objections has been overcome. Accordingly, Applicant requests favorable consideration and allowance of amended claims 1-8, 10-16, and 19-21.

The Commissioner is hereby authorized to charge any additional fee required in connection with the filing of this paper or credit any overpayment to Deposit Account No. 04-0780. Should there be any outstanding matter that needs to be resolved in the present application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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Attachments: Petition for Extension of Time